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Corporate Environment, Safety & Health
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LOCKHEED MARTIN 

Via Federal Express
CAY1198/261
WBS# 48720

November 20, 1998

Mr. Gerard Thibeault
Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Subject: **1998 Data Report**
 Comprehensive Sampling Program
 Crafton-Redlands Plume Project

Dear Mr. Thibeault:

Enclosed please find one copy of the **1998 Data Report, Comprehensive Sampling Program** prepared by H.S.I. Geotrans for the Lockheed Martin Corporation. This report presents analytical results from samples collected at active and inactive purveyor wells, active and inactive agricultural wells, standard single completion monitoring wells, and multi-port monitoring wells in the vicinity of the Crafton-Redlands Plume area. Sample collection began on June 5, 1998, and ended on September 23, 1998.

A total of 120 wells and 7 water system sampling points were sampled as part of the Comprehensive Sampling Program. Field forms and QA/QC documentation are available upon request.

Should you have any questions or comments, please contact John Hemmans at (818) 847-0191 or Tom Blackman at (818) 847-0791.

Sincerely,


Carol Yuge
Director

CAY:jmh:mg

Enclosure

cc: See attached distribution list

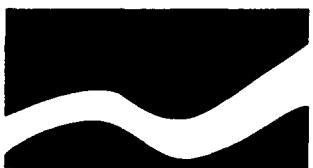
Mr. Gerard J. Thibeault

November 20, 1998

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**HSI
GEOTRANS**

A TETRA TECH COMPANY

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November 16, 1998

**Lockheed Martin Corporation
2550 North Hollywood Way, 3rd Floor
Burbank, California 91505**

**Attention: Mr. John Hemmans
Project Coordinator**

**Subject: Sampling of Existing Wells
Comprehensive Sampling Program
Crafton-Redlands Plume Project**

Dear Mr. Hemmans:

The purpose of this letter is to summarize the analytical results obtained from the Comprehensive Sampling Program. The Comprehensive Sampling Program commenced on June 5, 1998 and concluded on September 23, 1998.

A total of 120 wells and 7 water system sampling points were sampled as part of the Comprehensive Sampling Event including; active and inactive purveyor wells, active and inactive agricultural wells, standard single completion monitoring wells, and multi-port monitoring wells. The Comprehensive Sampling Program provided data to satisfy requirements for the Water Supply Contingency Plan (WSCP) sampling program for the month of June 1998, N-nitrosodimethylamine (NDMA), and 1,4-dioxane analyses requested by the State of California Department of Health Services (DHS), geochemical data requirements to aid in the understanding of area water chemistry, and volatile organic compound (VOC) and perchlorate data to support model calibration. A list of wells sampled under the Comprehensive Sampling Program is provided on Table 1 and shown on Plate 1.

The WSCP program includes 31 wells and 7 water system pipeline sampling points. Most of these locations are sampled once a month for VOCs and perchlorate. The DHS requested that Lockheed Martin sample 11 purveyor and monitoring wells for NDMA and 2 monitoring wells for 1,4 dioxane. To assist in the geochemical analysis, 31 wells (including two ports at LMW-1) were sampled for the following: VOCs; perchlorate; general minerals; isotopes including; tritium, oxygen-18,

deuterium, and carbon-13; priority pollutant list (PPL) metals; biologic oxygen demand (BOD); chemical oxygen demand (COD); and total organic carbon (TOC). Wells not sampled for other purposes were sampled for VOCs and perchlorate to support the groundwater model calibration. Some City of Riverside wells were sampled for perchlorate only. A summary of the analytes tested is provided on Table 2.

METHODOLOGY

A summary of the procedures and protocols that were used during the comprehensive sampling are outlined below and detailed in the referenced documents. Groundwater samples were collected in accordance with the State of California Regional Water Quality Control Board - Los Angeles Region (LARWQCB) Well Investigation Program (WIP) standards. In addition, HSI GeoTrans followed applicable sections of the Quality Assurance Project Plan (QAPP) Addendum, Standard Operating Procedures (SOP) Addendum, and Health and Safety Plan (HASP) Addendum dated September 29, 1997, developed for Task 3 of the Redlands Groundwater Plume Project.

- A groundwater sample was collected when field parameters were stable and/or a minimum of three casing volumes of groundwater was removed. Field parameter measurements of pH, conductivity, temperature, turbidity, dissolved oxygen, and redox were collected.
- Groundwater samples collected from active production wells were obtained from existing sample ports located at or near the well head. Samples from inactive wells and monitoring wells were collected using a low-flow purge pump. Groundwater samples from multi-port wells were obtained utilizing specialized equipment.
- Samples were labeled and stored at approximately 4°C in insulated coolers with containerized ice pending transfer to the project laboratory. Approximately 10 percent of the total samples obtained were collected as QA/QC samples, consisting of duplicates and trip blanks with the exception of NDMA. NDMA splits were submitted to a second laboratory for 100 percent of the samples collected.
- Purge water from active wells was discharged into existing conveyance systems. Purge water from Norton monitoring wells was transferred to a frac tank, sampled, and discharged under the Lockheed Martin Task 3 NPDES permit. Purge water from inactive wells was discharged on the ground in agricultural fields or open field areas, as approved by the RWQCB.

- All field-collected data was recorded on appropriate field forms including: GEOLIS well purging forms, GEOLIS water sampling forms, and Westbay Instrument field forms. Other field-related data not recorded on the GEOLIS forms was recorded in a field notebook. Log entries in the field notebook were completed in accordance with WIP procedures. The field forms are provided as Attachment A and available upon request.
- All collected samples were submitted under chain of custody to Del Mar Analytical in Irvine, California. Del Mar analyzed submitted samples for VOCs, general minerals, priority pollutant metals, perchlorate, BOD, COD, and TOC. All other analyses were subcontracted to other laboratories. Del Mar subcontracted Illinois State Geological Laboratory to analyze samples for tritium, oxygen-18, deuterium, and carbon-13. The NDMA analyses were performed at Pacific Analytical in Carlsbad, California and Data Chem Laboratory in Salt Lake City, Utah. The 1,4-dioxane analysis was performed at Agriculture & Priority Pollutant Laboratory (APPL) in Fresno, California. A list of analyses performed and analytical methods is provided on Table 2.
- Waste water discharged under the Lockheed Martin Task 3 NPDES permit was sampled prior to discharge for VOCs by EPA Method 601/602, DBCP by EPA Method 504, oil and grease by EPA Method 413.2, and nitrate as nitrogen by EPA Method 300.0.

RESULTS

A summary of the analytical results for detected VOCs, perchlorate, and NDMA are provided on Table 3. The general mineral results are provided on Table 4. A summary of the priority pollutant list (PPL) metals results is provided on Table 5. All other analytes including; 1,4-dioxane, BOD, COD, TOC, and isotopes (tritium, oxygen-18, deuterium, and carbon-13) are provided on Table 6. The trichloroethene (TCE) and perchlorate results are plotted on Plates 2 and 3, respectively. Chain-of-custody, laboratory data sheets, and QA/QC documentation are provided in Attachment B. Attachment B is available upon request.

A total of 120 wells and 7 water system sampling points were sampled as part of the Comprehensive Sampling Event. Several of these wells are multi-port wells monitoring depth-discrete zones, thus, a total of 150 samples were collected. TCE concentrations ranged from not detected in many wells to 29 micrograms per liter ($\mu\text{g/L}$) at the Lugo Water Company well, an agricultural well (Table 3, Plate 2). Perchlorate concentrations ranged from not detected in several wells to 130 $\mu\text{g/L}$ at the Marigold Farms Acquil well, an agricultural well (Table 3, Plate 3). Based on the findings of the Comprehensive Sampling Program and the Task 3B well installation program (Task 3B Technical Memorandum submitted to the RWQCB on September

18, 1998), the TCE and perchlorate plume maps have been updated and provided as Plates 2 and 3, respectively.

The samples collected for NDMA were all below the method detection limit (Table 3). A report summarizing the findings of the NDMA sampling event was submitted to the DHS on August 18, 1998. All the samples collected for 1,4-dioxane were below the practical quantification limit of 1 ug/L. Low values below the practical quantification limit of 1 ug/L ("J-values") were reported for some of the samples (Table 6). A detailed report summarizing the 1,4-dioxane results was submitted to the DHS on August 10, 1998.

The general mineral results indicate that in general the water is of calcium-bicarbonate type. The results of the PPL metals analyses revealed low concentrations of three metals (antimony, arsenic, and selenium) in four samples analyzed (Table 5).

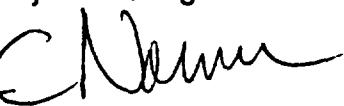
CLOSING

HSI GeoTrans greatly appreciates being of continued service to Lockheed Martin Corporation on this project. Should you have any questions or comments, please do not hesitate to call.

Sincerely,
HSI GEOTRANS



Roy J. Marroquin
Project Manager



James C. Norman, R.G., C.HG.
Project Director

TABLES

TABLE 1
COMPREHENSIVE SAMPLING PROGRAM

HSI#	Well Name	PERCHLORATE	VOC	INDMA	GEOCHEM	COMMENTS
ACTIVE PURVEYOR WELLS						
	City of Loma Linda Wells					
691	COLLMt.View#1	●	●	●		WSCP
692	COLLMt.View#2	●	●	●		WSCP
693	COLLRichardson#1	●	●			WSCP
694	COLLRichardson#2	●	●	●		WSCP
99	COLLNicks	●	●			
	City of Redlands Wells					
65	COR#31-A	●	●	●		
75	COR#37	●	●			
2673	COR#38	●				WSCP
81	COR#41	●	●			
12	CORAgate#1	●	●			
9	CORAgate#2	●	●			
26	CORAirport	●	●			
542	CORChurchSt.	●				WSCP
11	CORCrafton	●	●			
13	CORE.Lugonia#4	●	●			
14	CORMadeira	●	●			
17	CORMaguett#2	●	●			
535	CORMentoneAcres	●	●			WSCP
1029	CORMission	●	●			
29	COROrangeSt. #5	●	●			WSCP
74	CORRees	●	●	●	●	WSCP
	City of Riverside Gage Wells					
252	Gage26-1	●	●		●	WSCP
258	Gage27-1	●	●			WSCP
259	Gage27-2	●	●			WSCP
260	Gage29-1	●	●			WSCP
219	Gage29-2	●	●	●	●	WSCP
220	Gage29-3	●	●	●	●	WSCP
218	Gage30-1	●	●			WSCP
214	Gage31-1	●	●		●	WSCP
215	Gage46-1	●	●		●	WSCP
253	Gage51-1	●	●			WSCP
216	Gage56-1	●	●			WSCP
257	Gage66-1	●	●			WSCP
644	Gage92-1	●	●	●	●	WSCP
641	Gage92-2	●	●			WSCP
642	Gage92-3	●	●			WSCP
645	Gage 6 New	●	●	●		WSCP
	City of Riverside Waterman Wells					
273	RIVHunt#6	●	●			WSCP
271	RIVHunt#10	●	●			WSCP
272	RIVHunt#11	●	●			WSCP
254	RIVRaub#2	●	●			
224	RIVRaub#3	●	●			
255	RIVRaub#4	●	●			
222	RIVRaub#5	●	●		●	
666	RIVRaub#6	●	●			
665	RIVRaub#8	●	●			

TABLE 1
COMPREHENSIVE SAMPLING PROGRAM

HS#	Well Name	PERCHLORATE	VOC	NDMA	GEOCHEM	COMMENTS
246	RIVWarren2	●	●		●	
248	RIVWarren3	●	●		●	
Other City of Riverside Wells						
779	Mill	●				
277	Flume#2	●				
278	Flume #6	●				
732	Gage DeBerry	●				
2235	Van Buren #1	●				
2234	Van Buren #2	●				
275	Stewart #20	●	●			
Loma Linda University Wells						
267	LLUniv.Anderson #2	●	●			WSCP
717	LLUniv.Anderson #3	●	●			WSCP
Riverside Highland Water Company Wells						
1354	RHWC#2	●	●			
1361	RHWCFlow#5	●	●			
383	RHWCRiver&Highgrove18	●	●			
727	RHWC#4A	●	●			
679	RHWC#12	●	●			
2150	RHWC#17	●	●			
1311	RHWC#20	●	●			
Southern California Edison (SCE) Well						
554	So.Cal.Edison#2 (AUX)	●	●			WSCP
San Bernardino Wells						
2255	BP-3	●	●			
2256	BP-5	●	●			
3017	COSB Century	●	●			
3049	Chandler	●	●			
City of Colton Wells						
1455	COG#22	●	●			
3046	COG#23	●	●			
Meeks and Daley/Elsinore Wells						
228	M&D #59	●	●			
231	M&D Coburn	●	●			
1284	M&D STN 91	●	●			
PURVEYOR/WATER SYSTEM SAMPLING POINTS						
City of Loma Linda Water System Sampling Points						
2967	Mountain View Blend-Lawton	●	●			WSCP
3016	Mountain View Blend-Timeteo	●	●			WSCP
2968	Richardson Blend	●	●			WSCP
City of Riverside Water System Sampling Points						
2946	Iowa Booster (Waterman)	●	●			WSCP
2947	Gage Delivery (Gage)	●	●			WSCP
2948	7th & Chicago (Reservoir)	●	●			WSCP
3018	Arlington (Gage Canal)	●	●			WSCP
ACTIVE AGRICULTURAL PRODUCTION WELLS						
Crafton/Redlands						
54	CrimSouth	●	●			
562	GladystaWellWaterCo.	●	●			
41	Harold Daniels (FairviewWaterCo.)	●	●		●	
53	KInv(CrimNorth)	●	●			

TABLE 1

COMPREHENSIVE SAMPLING PROGRAM

HSI#	Well Name	PERCHLORATE	VOC/TSP	NDMA	GEOCHEM	Comments
39	LangfordRanches AlabamaSt.	●	●		●	
40	LangfordRanchesNevadaSt.	●	●			
575	Mentone/OldWell#1	●	●			
544	TennesseeMutual(East)	●	●			
36	TennesseeMutual(West)	●	●			
37	NewEnglandWaterCo.-L04	●	●			
30	WeatherWax	●	●			
43	MarigoldFarms-Barton(RWQCB#1)	●	●			
556	MarigoldFarmsCaliforniaStr.	●	●			
42	MarigoldFarms-Acquil(RWQCB#3)	●	●		●	
66	LugoWaterCo.-K03	●	●		●	
48	MissionMutual	●	●			
460	MentoneCitrusGrowers	●	●			
57	StoweWaterCo.(New)	●	●			
90	PharoahPowell	●	●			
561	ValdepenaAcresAlmond	●	●		●	
80	KansasSt.WaterCo.	●	●			
592	OldTownWellCo.-K03Z	●	●			
25	Sunwest Alabama St.	●	●			
1749	Sunwest Orange St.	●	●			
548	Marshburn#H05	●	●			
550	Daniels Ranch - Alabama St	●	●			
INACTIVE AGRICULTURAL WELLS						
547	ArmstrongWell#2	●	●			
61	Langford - G01	●	●		●	
NORTON AIR FORCE BASE MONITORING WELLS						
Norton Central Base Area (CBA) Wells						
2347	MW180	●	●		●	
2358	MW190	●	●		●	
2363	MW195	●	●		●	
2366	MW198	●	●		●	
2379	MW209	●	●		●	
2613	MW305	●	●		●	
2615	MW307	●	●		●	
2619	MW311	●	●		●	
2631	MW327	●	●		●	
2503	MLW-5, Zone 4 (385)	●	●		●	
2960	MLW-9, Zone 1 (471)	●	●			
2959	MLW-9, Zone 2 (397)	●	●			
2958	MLW-9, Zone 3 (334)	●	●			
2957	MLW-9, Zone 4 (251)	●	●			
2956	MLW-9, Zone 5 (199)	●	●			
2955	MLW-9, Zone 6 (136)	●	●			
Norton Air Force Base Industrial Waste Treatment Plant (IWTP) and Golf Course Area (GCA) Wells						
2369	MW20	●	●		●	
2416	MW244	●	●		●	
2443	MW269	●	●		●	
2309	MW134 (Golf Course)	●	●		●	
City of Redlands Landfill Well						
2566	CORLandfillB-4B	●	●			
Lockheed Multiport Monitoring Well LMW-1						
2720	LMW-1, Port 1 (120)	●	●	●		Trimester

TABLE 1
COMPREHENSIVE SAMPLING PROGRAM

HSI#	Well Name	PERCHLORATE	VOC	NDMA	GEOCHEM	COMMENTS
2721	LMW-1, Port 2 (170)	●	●	●		Trimester
2722	LMW-1, Port 3 (220)	●	●	●	●	Trimester
2723	LMW-1, Port 4 (285)	●	●	●	●	Trimester
2724	LMW-1, Port 5 (340)	●	●	●		Trimester
2725	LMW-1, Port 6 (410)	●	●	●		Trimester
2726	LMW-1, Port 7 (480)	●	●	●		Trimester
2727	LMW-1, Port 8 (530)	●	●	●		Trimester
2728	LMW-1, Port 9 (610)	●	●	●		Trimester
2729	LMW-1, Port 10 (700)	●	●	●		Trimester
Lockheed Multiport Monitoring Well LMW-2						
2730	LMW-2, Port 1 (125)	●	●	●		Trimester
2731	LMW-2, Port 2 (180)	●	●	●		Trimester
2732	LMW-2, Port 3 (215)	●	●	●		Trimester
2733	LMW-2, Port 4 (280)	●	●	●		Trimester
2734	LMW-2, Port 5 (350)	●	●	●		Trimester
2735	LMW-2, Port 6 (395)	●	●	●		Trimester
2736	LMW-2, Port 7 (485)	●	●	●		Trimester
2737	LMW-2, Port 8 (555)	●	●	●		Trimester
2738	LMW-2, Port 9 (595)	●	●	●		Trimester
2739	LMW-2, Port 10 (695)	●	●	●		Trimester

Notes:

● = Well sampled for listed analyses.

ft-bgs = feet below ground surface

VOC = volatile organic compounds

NDMA = N-Nitrosodimethylamine

GEOCHEM = a suite of analyses for geochemical assessment purposes, including VOCs, perchlorate, general minerals, tritium, oxygen-18, deuterium, carbon-13, and priority pollutant list (PPL) metals.

TD = total depth of well

WSCP = Water Supply Contingency Plan Sampling Program

Trimester = Trimester multiport monitoring well sampling program

TABLE 2
LIST OF ANALYTES

Volatile Organic Compounds (EPA Method 502.2)			
Benzene	1,3-Dichloropropane		
Bromobenzene	2,2-Dichloropropane		
Bromoform	1,1-Dichloropropene		
Bromochloromethane	cis-1,3-Dichloropropene		
Bromodichloromethane	trans-1,3-Dichloropropene		
Bromoform	Ethylbenzene		
Bromomethane	Hexachlorobutadiene		
n-Butylbenzene	Isopropylbenzene		
sec-Butylbenzene	p-Isopropyltoluene		
tert-Butylbenzene	Methylene Chloride		
Carbon tetrachloride	Naphthalene		
Chlorobenzene	n-propylbenzene		
Chloroethane	Styrene		
Chloroform	1,1,1,2-Tetrachloroethane		
Chloromethane	1,1,2,2-Tetrachloroethane		
2-Chlorotoluene	Tetrachloroethene		
4-Chlorotoluene	Toluene		
Dibromochloromethane	1,2,3-Trichlorobenzene		
1,2-Dibromo-3-chloropropane (DBCP)	1,2,4-Trichlorobenzene		
1,2-Dibromoethane (Ethylene dibromide-EDB)	1,1,1-Trichloroethane		
Dibromomethane	1,1,2-Trichloroethane		
1,2-Dichlorobenzene	Trichloroethene		
1,3-Dichlorobenzene	Trichlorofluoromethane		
1,4-Dichlorobenzene	1,2,3-Trichloropropane		
Dichlorodifluoromethane	1,2,4-Trimethylbenzene		
1,1-Dichloroethane	1,3,5-Trimethylbenzene		
1,2-Dichloroethane	Vinyl Chloride		
1,1-Dichloroethene	o-Xylene		
cis-1,2-Dichloroethene	m,p-Xylenes		
trans-1,2-Dichloroethene			
1,2-Dichloropropane			
General Minerals			
Analyte	Method	Analyte	Method
Ammonia-NH3	350.3	Zinc	6010
Boron	6010	Bicarbonate Alkalinity	SM 2320B
Carbonate Alkalinity	SM 2320B	Calcium	6010
Copper	6010	Chloride	300.0
Total Hardness	SM 2320B	Flouride	300.0
Iron	6010	Hydroxide Alkalinity	SM 2320B
Manganese	6010	Magnesium	6010
Nitrite-N	300.0	pH	150.1
Total Phosphate	300.0	Potassium	6010
Specific Conductance	SM 2510B	Sodium	6010
Sulfide	SM 4500-S-C	Sulfate	300.0
Surfactants	SM 5540C	Total Dissolved Solids	SM 2540C

TABLE 2
LIST OF ANALYTES

Priority Pollutant Metals			
Analyte	Method	Analyte	Method
Antimony	6010	Arsenic	6010
Beryllium	6010	Cadmium	6010
Chromium	6010	Copper	6010
Lead	6010	Mercury	7470
Nickel	6010	Selenium	6010
Silver	6010	Thallium	6010
Zinc	6010		

Isotopes	
0-18 Deuterium	C-13 Tritium

Perchlorate (Method 300.0 Modified)	
Perchlorate	

NDMA	
NDMA	

1,4-Dioxane (Method 8270 Modified)	
1,4-Dioxane	

Other Analytes	
Analyte	Method
Biochemical Oxygen Demand	405.1
Chemical Oxygen Demand	410.4
Total Organic Carbon	415.1

Field Tests	
pH	Temperature
Dissolved Oxygen	Turbidity
Redox (ORP)	Electrical Conductivity

Table 3
Analytical Results
Perchlorate, VOCs, and NDMA

HSI#	Well Name	Sample Date	Perchlorate	VOCs												NDMA ¹	
				TCE	PCE	cis-1,2-DCE	1,1-DCE	DBCP	Toluene	Xylenes	BDCM	Bromoform	Chloroform	DBCM	Methylene chloride		
ACTIVE PURVEYOR WELLS																	
City of Loma Linda Wells																	
691	COLL Mt. View#1	06/11/98	27	0.99	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	
692	COLL Mt. View#2	06/11/98	5.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
693	COLL Richardson#1	06/11/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
694	COLL Richardson#2	06/25/98	4.6	0.63	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
99	COLL Nicks	06/11/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
City of Redlands Wells																	
65	COR#31-A	06/23/98	65	0.89	ND(0.5)	ND(0.5)	0.73	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
75	COR#37	06/23/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	4.5	ND(0.5)	20	2	ND(1)	NA
2673	COR#38	06/11/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
81	COR#41	06/18/98	12	3.3	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
12	CORAgate#1	06/23/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
9	CORAgate#2	06/10/98	4.1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
26	CORAirport	06/23/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
542	CORChurchSt.	06/11/98	5.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	CORCrafton	06/23/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
13	CORE Lugonia#4	06/23/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
14	CORMadeira	06/10/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
17	CORMaguett#2	06/10/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
535	CORMentonAcres	06/10/98	4.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
1029	CORMission	06/23/98	13	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
29	COROrangeSt. #5	06/10/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
74	CORRees	06/10/98	6.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
City of Riverside Gage Wells																	
252	Gage26-1	06/08/98	9.3	9.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
258	Gage27-1	06/16/98	7.1	9	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
259	Gage27-2	06/05/98	10	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
260	Gage29-1	06/05/98	11	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
219	Gage29-2	06/08/98	21	2.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
220	Gage29-3	06/16/98	44	5.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
218	Gage30-1	06/05/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
214	Gage31-1	06/08/98	5.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
215	Gage46-1	06/08/98	6.0	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
253	Gage51-1	06/05/98	12	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
216	Gage56-1	06/05/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
257	Gage66-1	06/05/98	10	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
644	Gage92-1	06/08/98	14	0.64	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
641	Gage92-2	06/05/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
642	Gage92-3	06/05/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
645	Gage 6 New	06/10/98	34	1.4	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND
City of Riverside Waterman Wells																	
273	RIVHunt#6	06/26/98	9.0	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
271	RIVHunt#10	06/26/98	6.3	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA

Table 3
Analytical Results
Perchlorate, VOCs, and NDMA

HSI#	Well Name	Sample Date	Perchlorate	VOCs												NDMA ¹	
				TCE	PCE	cis-1,2-DCE	1,1-DCE	DBCP	Toluene	Xylenes	BDCM	Bromoform	Chloroform	DBCM	Methylene chloride		
272	RIVHunt#11	06/26/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
254	RIVRaub#2	06/28/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
224	RIVRaub#3	06/26/98	ND(4)	ND(0.5)	0.61	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
255	RIVRaub#4	06/26/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
222	RIVRaub#5	06/25/98	ND(4)	8.6	1.1	1.5	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
666	RIVRaub#6	06/18/98	ND(4)	0.52	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
665	RIVRaub#8	06/18/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NA	
246	RIVWarren2	07/14/98	ND(4)	5.8	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
248	RIVWarren3	07/14/98	ND(4)	5.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
Other City of Riverside Wells																	
779	Mill	07/16/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
277	Flume#2	07/16/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
278	Flume #6	07/16/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
732	Gage DeBerry	07/16/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2235	Van Buren #1	07/16/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2234	Van Buren #2	07/16/98	ND(4)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
275	Stewart #20	09/21/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
Loma Linda University Wells																	
267	LLUniv.Anderson #2	06/08/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
717	LLUniv.Anderson #3	06/08/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
Riverside Highland Water Company Wells																	
1354	RHWC#2	06/15/98	15	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
1361	RHWCFlow#5	06/15/98	ND(4)	2.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
383	RHWCRiver&Highgrove18	06/15/98	11	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
727	RHWC#4A	07/30/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
679	RHWC#12	09/02/98	6.0	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
2150	RHWC#17	07/30/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
3048	RN#20	07/30/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
Southern California Edison (SCE) Well																	
554	So.Cal.Edison#2 (AUX)	06/05/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
San Bernardino Wells																	
2255	BP-3	06/30/98	5.0	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
2256	BP-5	06/30/98	ND(4)	ND(0.5)	4.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
3017	COSB Century	07/29/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
3049	Chandler	07/29/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
City of Colton Well																	
1455	COC#22	09/23/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.7	ND(0.5)	ND(1)	NA
3046	COC#23	08/31/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
Meeks & Daley Wells																	
228	M&D#59	09/03/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
231	M&D Coburn	09/03/98	ND(4)	1.3	ND(0.5)	1.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1.2	NA
1284	M&D Stn91	09/03/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA

Table 3
Analytical Results
Perchlorate, VOCs, and NDMA

HSI#	Well Name	Sample Date	Perchlorate	VOCs												NDMA ¹		
				TCE	PCE	cis-1,2-DCE	1,1-DCE	DBCP	Toluene	Xylenes	BDCM	Bromoform	Chloroform	DBCM	Methylene chloride			
PURVEYOR/WATER SYSTEM SAMPLING POINTS																		
City of Loma Linda Water System Sampling Points																		
2967	Mountain View Blend-Lawton	06/11/98	4.8	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA		
3016	Mountain View Blend-Timoteo	06/11/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA		
2968	Richardson Blend	06/11/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA		
CITY OF RIVERSIDE WATER SYSTEM SAMPLING POINTS																		
2946	Iowa Booster (Waterman)	06/18/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.72	ND(0.5)	ND(0.5)	ND(1)	NA	
2947	Gage Delivery (Gage)	06/18/98	6.9	0.64	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.71	ND(0.5)	0.64	ND(1)	NA	
2948	7th & Chicago (Reservoir)	06/18/98	4.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1.4	ND(0.5)	1.1	ND(1)	NA	
3018	Arlington (Gage Canal)	06/18/98	7.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	2.8	ND(0.5)	1.1	ND(1)	NA	
ACTIVE AGRICULTURAL PRODUCTION WELLS																		
Crafton/Redlands																		
54	CrimSouth	06/09/98	17	12	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
562	GladystaWellWaterCo.	06/09/98	14	0.59	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
41	Harold Daniels (FairviewWaterCo.)	06/12/98	51	11	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
53	KInv(CrimNorth)	06/09/98	42	10	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
39	LangfordRanches AlabamaSt.	06/15/98	43	8.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
40	LangfordRanchesNevadaSt.	06/16/98	62	10	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
575	Mentone/OldWell#1	06/19/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
544	TennesseeMutual(East)	06/10/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
36	TennesseeMutual(West)	06/15/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
37	NewEnglandWaterCo.-L04	06/22/98	4.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
30	WeatherWax	06/19/98	28	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
43	MarigoldFarms-Barton(RWQCB#1)	06/09/98	14	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
556	MarigoldFarmsCaliforniaStr.	06/09/98	11	7.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
42	MarigoldFarms-Acquil(RWQCB#3)	06/12/98	130	25	ND(0.5)	ND(0.5)	0.87	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
66	LugoWaterCo.-K03	06/12/98	120	29	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(1)	ND(2)	NA
48	MissionMutual	06/19/98	14	1.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA
460	MentoneCitrusGrowers	06/09/98	ND(4)	ND(0.5)	0.57	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
57	StoweWaterCo.(New)	06/24/98	34	2.8	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
90	PharoahPowell	06/22/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
561	ValdepenaAcresAlmond	07/14/98	14	5.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
80	KansasSTWaterCo.	07/17/98	14	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
592	OldTownWellCo.-K03Z	06/24/98	20	3.0	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
25	Sunwest Alabama St.	06/15/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
1749	Sunwest Orange St.	06/19/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
548	Marshburn#H05	07/01/98	43	1.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	1.7	NA	
550	Daniels Ranch - Alabama St	07/06/98	87	13	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
OTHER INACTIVE WELLS																		
Crafton/Redlands																		
547	Armstrong#2	07/08/98	59	1.1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	
61	Langford - G01	07/10/98	38	8.1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA	

Table 3
Analytical Results
Perchlorate, VOCs, and NDMA

HSI#	Well Name	Sample Date	Perchlorate	VOCs												NDMA ¹				
				TCE	PCE	cis-1,2-DCE	1,1-DCE	DBCP	Toluene	Xylenes	BDCM	Bromoform	Chloroform	DBCM	Methylene chloride					
NORTON AIR FORCE BASE MONITORING WELLS																				
Norton Central Base Area (CBA) Wells																				
2347	MW180	07/23/98	ND(4)	4.7	ND(0.5)	1.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2358	MW190	07/23/98	ND(4)	4.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2363	MW195	07/22/98	ND(4)	5.4	0.61	0.74	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2366	MW198	07/23/98	ND(4)	5.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2379	MW209	07/22/98	ND(4)	4.1	ND(0.5)	1.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2613	MW305	07/22/98	ND(4)	4.8	ND(0.5)	0.63	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2615	MW307	07/22/98	5.4	7.4	ND(0.5)	3.1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2619	MW311	07/22/98	ND(4)	34	0.96	2.9	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2631	MW327	07/22/98	ND(4)	25	0.5	3	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2593	MLW-5, Zone 4 (385)	07/27/98	ND(4)	3.2	ND(0.5)	3.4	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2960	MLW-9, Zone 1 (471)	07/28/98	17	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.72	0.83	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2959	MLW-9, Zone 2 (397)	07/28/98	17	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.97	0.84	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2958	MLW-9, Zone 3 (334)	07/28/98	17	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.74	0.82	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2957	MLW-9, Zone 4 (251)	07/28/98	16	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.81	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2956	MLW-9, Zone 5 (199)	07/28/98	16	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.5	0.79	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2955	MLW-9, Zone 6 (136)	07/28/98	6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
Norton Air Force Base Industrial Waste Treatment Plant (IWTP) and Golf Course Area (GCA) Wells																				
2369	MW20	07/22/98	ND(4)	4.2	ND(0.5)	0.5	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2416	MW244	07/23/98	ND(4)	ND(0.5)	0.63	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2443	MW269	07/27/98	ND(4)	ND(0.5)	0.76	0.71	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
2309	MW134 (Golf Course)	07/27/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
City of Redlands Landfill Well																				
2566	COR Landfill B-4B	06/25/98	ND(4)	0.55	1.7	0.76	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	NA			
Lockheed Multiport Monitoring Well LMW-1																				
2720	LMW-1, Port 1 (120)	06/16/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2721	LMW-1, Port 2 (170)	06/22/98	ND(4)	1.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2722	LMW-1, Port 3 (220)	06/18/98	ND(4)	16	ND(0.5)	5.9	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2723	LMW-1, Port 4 (285)	06/18/98	ND(4)	13	ND(0.5)	5.8	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2724	LMW-1, Port 5 (340)	06/19/98	21	2.9	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2725	LMW-1, Port 6 (410)	06/22/98	19	2.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2726	LMW-1, Port 7 (480)	06/17/98	64	9.2	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	0.61	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2727	LMW-1, Port 8 (530)	06/17/98	45	3.9	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2728	LMW-1, Port 9 (610)	06/16/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2729	LMW-1, Port 10 (700)	06/15/98	4.1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
Lockheed Multiport Monitoring Well LMW-2																				
2730	LMW-2, Port 1 (125)	06/12/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2731	LMW-2, Port 2 (180)	06/08/98	70	9.1	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2732	LMW-2, Port 3 (215)	06/09/98	81	16	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2733	LMW-2, Port 4 (280)	06/12/98	45	8.4	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2734	LMW-2, Port 5 (350)	06/12/98	48	7.9	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2735	LMW-2, Port 6 (395)	06/10/98	34	7.8	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			
2736	LMW-2, Port 7 (485)	06/11/98	6.7	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(1)	ND			

Table 3
Analytical Results
Perchlorate, VOCs, and NDMA

HSI#	Well Name	Sample Date	Perchlorate	VOCs												NDMA ¹
				TCE	PCE	cis-1,2-DCE	1,1-DCE	DBCP	Toluene	Xylenes	BDCM	Bromoform	Chloroform	DBCM	Methylene chloride	
2737	LMW-2, Port 8 (555)	06/11/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND
2738	LMW-2, Port 9 (595)	06/10/98	ND(4)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND
2739	LMW-2, Port 10 (695)	06/09/98	5.4	1.6	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND

¹ NDMA samples tested at both DataChem and Pacific laboratories. Detection limit at Pacific is 5 ppt. Detection limit at DataChem is 20 ppt. All other compounds measured in ppb.

ND = Not detected at laboratory detection limit.

NA = Well not analyzed for specified compound.

DP = Data pending.

Table 4
General Minerals

HSM#	Well	Sample Date	Bicarbonate Alkalinity	Boron	Calcium	Chloride	Copper	Fluoride	Hardness	Ion Balance Difference	Iron	Magnesium	Manganese	Nitrate as N	pH (Laboratory)	Phosphate	Potassium	Sodium	Specific Conductance	Sulfate	Surfactants	Total Dissolved Solids	Zinc
74	CORReesWell	07/07/98	140	ND	44	10	ND	0.73	140	2.3	ND	7.8	ND	3.2	7.8	ND	3.1	16	400	23	ND	200	ND
252	Gage26-1	07/07/98	240	0.093	94	25	ND	0.53	300	1.5	ND	16	ND	7.6	7.6	ND	4.1	50	850	120	ND	500	ND
219	Gage29-2	07/06/98	230	0.09	91	21	ND	0.61	290	1.5	ND	15	ND	10	7.7	ND	4	53	840	120	ND	500	ND
220	Gage29-3	07/07/98	220	0.075	83	15	ND	ND	270	1.9	ND	15	ND	10	7.5	ND	4	49	790	85	ND	590	ND
214	Gage31-1	07/06/98	180	0.11	66	24	ND	0.56	210	2.4	ND	12	ND	6	7.7	ND	3.6	28	590	54	ND	320	ND
215	Gage46-1	07/06/98	200	0.13	68	34	ND	0.56	220	1.6	ND	13	ND	5.4	7.6	ND	3.9	36	620	46	ND	360	NU
644	Gage92-1	07/07/98	140	0.079	39	15	0.01	0.67	120	1.3	ND	5.3	ND	4.3	7.8	ND	2.4	39	450	33	ND	250	ND
222	RIVRaub#5	07/07/98	180	0.085	82	15	ND	ND	290	3.1	ND	15	ND	2.5	7.7	ND	3.3	27	740	120	ND	440	ND
246	RIVWarren2	07/14/98	220	0.097	150	26	ND	ND	480	3.4	0.073	26	ND	1.7	7.3	ND	4.7	36	1100	330	ND	780	ND
248	RIVWarren3	07/14/98	180	0.11	88	16	ND	ND	270	1.7	ND	13	ND	1.9	7.5	ND	3	35	720	150	ND	450	ND
41	Harold Daniels (FairviewWaterCo)	06/12/98	140	ND	50	6.6	ND	0.77	150	ND	ND	6.6	ND	4.4	8.1	ND	1.9	18	410	31	ND	200	ND
39	LangfordRanches AlabamaSt	06/15/98	130	ND	47	7.3	ND	ND	150	ND	ND	7.5	ND	4.3	7.9	ND	2.1	13	380	27	ND	200	ND
42	MangoldFarms-Acqui(RWQCB#3)	06/12/98	190	ND	79	10	ND	0.5	250	ND	ND	13	ND	12	8	ND	3.2	27	640	67	ND	340	ND
66	LugoWaterCo -K03	06/12/98	160	ND	67	9.2	ND	0.72	210	ND	ND	9.5	ND	8.1	8.1	ND	2.3	17	510	38	ND	250	ND
561	ValdepenaAcresAlmond	07/14/98	160	ND	63	11	ND	ND	190	0.6	ND	9.2	ND	8.2	7.7	ND	2.4	23	530	45	ND	320	ND
61	Langford - G01	07/10/98	190	ND	72	16	ND	0.73	230	3.1	ND	13	ND	10	7.7	ND	3.7	20	610	47	ND	350	ND
2347	MW180	07/23/98	160	0.11	66	17	ND	ND	210	10	ND	12	ND	2.5	7	ND	4	19	550	120	ND	340	ND
2358	MW190	07/23/98	130	0.11	64	12	ND	ND	210	0.7	ND	13	ND	2.4	6.9	ND	3.6	21	550	100	ND	330	ND
2363	MW195	07/22/98	150	0.15	51	15	ND	ND	160	3.5	ND	9.2	ND	2.8	7.3	ND	3.2	18	480	41	ND	270	ND
2366	MW198	07/23/98	170	0.11	80	17	ND	ND	260	2.7	ND	15	ND	2.5	7	ND	4	20	650	120	0.17	370	ND
2379	MW209	07/22/98	150	0.11	52	14	ND	ND	170	5.2	ND	9.9	ND	3	7.3	ND	3.2	18	480	55	ND	280	ND
2613	MW305	07/22/98	190	0.1	84	16	ND	ND	280	2.8	ND	16	ND	2.6	7.4	ND	3.8	22	680	120	ND	420	ND
2615	MW307	07/22/98	210	0.12	89	12	ND	ND	290	2.6	ND	16	ND	3.1	7.5	ND	3.6	24	680	120	ND	450	ND
2619	MW311	07/22/98	220	0.14	100	15	ND	ND	320	2.7	ND	18	ND	3.2	7.6	ND	3.4	27	800	150	ND	510	ND
2631	MW327	07/22/98	250	0.12	120	15	ND	ND	390	3.3	ND	21	ND	2.3	7.6	ND	4	30	910	200	ND	600	ND
2593	MLW-5, Zone 4 (385)	07/27/98	170	ND	71	12	ND	ND	220	1.1	0.021	11	ND	2.6	8.2	ND	3.1	24	550	73	ND	320	ND
2369	MW20	07/22/98	210	ND	68	5.2	ND	0.76	190	4.2	ND	4.1	ND	0.91	7.6	1.2	5	15	490	24	ND	290	ND
2416	MW244	07/23/98	120	0.072	39	12	ND	ND	120	0.6	ND	6.7	ND	2	6.7	ND	3.2	15	350	19	ND	190	ND
2443	MW269	07/27/98	290	ND	88	13	ND	ND	290	1.2	ND	16	ND	2	7.4	ND	5.1	26	670	24	ND	370	ND
2309	MW134 (Golf Course)	07/27/98	140	ND	39	14	ND	ND	130	1.2	0.031	7	ND	3.4	7.9	1.7	9	26	400	26	ND	240	0.048
2722	LMW-1, Port 3 (220)	06/18/98	390	0.051	48	27	ND	0.57	160	0.2	ND	8.9	0.33	2.3	7.7	10	5.6	160	1000	73	ND	680	0.032
2723	LMW-1, Port 4 (285)	06/18/98	370	ND	78	28	ND	0.5	260	0.7	ND	15	0.68	1.3	7.4	5.6	6.2	120	1000	100	ND	610	0.039

Note: All concentrations measured in mg/l

Table 5
EPA Priority Pollutant Metals

HSI#	Well Name	Sample Date	Antimony	Arsenic	Beryllium	Cadmium	Chromium (Total)	Lead	Mercury	Nickel	Selenium	Silver	Thallium
74	CORReesWell	07/07/98	ND(0.01)	ND(0.005)	ND(0.002)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
252	Gage26-1	07/07/98	ND(0.01)	ND(0.005)	ND(0.002)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
219	Gage29-2	07/06/98	ND(0.01)	ND(0.005)	ND(0.002)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
220	Gage29-3	07/07/98	ND(0.01)	ND(0.005)	ND(0.002)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
214	Gage31-1	07/06/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
215	Gage46-1	07/06/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
644	Gage92-1	07/07/98	ND(0.01)	ND(0.005)	ND(0.002)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
222	RIVRaub#5	07/07/98	ND(0.01)	ND(0.005)	ND(0.002)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
246	RIVWarren2	07/14/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
248	RIVWarren3	07/14/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
41	Harold Daniels (FairviewWaterCo.)	06/12/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
39	LangfordRanches AlabamaSt.	06/15/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
42	MarigoldFarms-Acqui(RWQCB#3)	06/12/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
66	LugoWaterCo.-K03	06/12/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
561	ValdepenaAcresAlmond	07/14/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
61	Langford - G01	07/10/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2347	MW180	07/23/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2358	MW190	07/23/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2363	MW195	07/22/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2366	MW198	07/23/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2379	MW209	07/22/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2613	MW305	07/22/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2615	MW307	07/22/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2619	MW311	07/22/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2631	MW327	07/22/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2369	MW20	07/27/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2416	MW244	07/23/98	ND(0.01)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2443	MW269	07/27/98	0.014	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2309	MW134 (Golf Course)	07/27/98	0.018	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2722	LMW-1, Port 3 (220)	06/18/98	ND(0.01)	0.009	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	ND(0.005)	ND(0.01)	ND(0.005)
2723	LMW-1, Port 4 (285)	06/18/98	ND(0.01)	0.0088	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.005)	ND(0.0002)	ND(0.01)	0.0052	ND(0.01)	ND(0.005)

Note: All concentrations are mg/l.

MLW-5, Zone 4 (385) - insufficient quantity of water to run analysis

Table 6
Other Analytes

HSI#	Well Name	Sample Date	Dioxane (ug/l)	Biochemical Oxygen Demand (mg/l)	Chemical Oxygen Demand (mg/l)	Total Organic Carbon (mg/l)	Deuterium (per mil)	Oxygen-18 (per mil)	Tritium (Tritium Unit)	Carbon-13 (per mil)
74	CORRees	07/07/98	NA	ND(2)	ND(20)	ND(1)	-67.8	-9.53	4.34	-10.9
252	Gage26-1	07/07/98	NA	ND(2)	ND(20)	ND(1)	-66.9	-8.77	2.49	-13.54
219	Gage29-2	07/06/98	NA	ND(2)	ND(20)	ND(1)	-66.5	-8.97	4.18	-13.17
220	Gage29-3	07/07/98	NA	ND(2)	ND(20)	ND(1)	-67.1	-9.07	4.47	-13.97
214	Gage31-1	07/06/98	NA	ND(2)	ND(20)	ND(1)	-67.8	-8.94	5.03	-11.88
215	Gage46-1	07/06/98	NA	ND(2)	ND(20)	ND(1)	-66.1	-8.93	4	-12.27
644	Gage92-1	07/07/98	NA	ND(2)	36	ND(1)	-70.9	-9.13	2.48	-11.79
222	RIVRaub#5	07/07/98	NA	ND(2)	20	ND(1)	-61.1	-8.11	7.64	-13.99
246	RIVWarren2	07/14/98	NA	ND(2)	150	ND(1)	P	P	P	P
248	RIVWarren3	07/14/98	NA	ND(2)	24	ND(1)	P	P	P	P
41	Harold Daniels (FairviewWaterCo.)	06/12/98	NA	NA	NA	NA	-70.9	-9.76	2.25	NA
39	LangfordRanches AlabamaSt.	06/15/98	NA	NA	NA	NA	-71.5	-9.53	4.18	-10.53
42	MarigoldFarms-Acquil(RWQCB#3)	06/12/98	NA	NA	NA	NA	-70.1	-9.19	6	NA
66	LugoWaterCo.-K03	06/12/98	NA	NA	NA	NA	-72	-9.51	6.47	NA
561	ValdepenaAcresAlmond	07/14/98	NA	ND(2)	64	ND(1)	P	P	P	P
61	Langford - G01	07/10/98	NA	ND(10)	ND(20)	ND(1)	-69.5	-9.22	6.76	-12.24
2347	MW180	07/23/98	NA	ND(2)	59	1.3	-58.8	-8.1	4.89	-13.41
2358	MW190	07/23/98	NA	ND(2)	ND(20)	ND(1)	-58.5	-7.77	7.66	-14.88
2363	MW195	07/22/98	NA	ND(3)	ND(20)	1.8	-58.5	-8.06	12.29	-12.19
2366	MW198	07/23/98	NA	ND(2)	ND(20)	ND(1)	-56	-7.68	10.73	-14.33
2379	MW209	07/22/98	NA	ND(3)	27	ND(1)	-59.6	-7.99	5.97	-12.47
2613	MW305	07/22/98	NA	ND(3)	ND(20)	2.8	-59.8	-8.41	6.03	-12.93
2615	MW307	07/22/98	NA	ND(3)	ND(20)	ND(1)	-58.3	-7.79	7.52	-13.82
2619	MW311	07/22/98	NA	ND(3)	ND(20)	ND(1)	-56.8	-7.94	11.7	-14.77
2631	MW327	07/22/98	NA	ND(3)	ND(20)	ND(1)	-56.8	-7.75	7.92	-15.47
2369	MW20	07/27/98	NA	ND(3)	ND(20)	4.7	-47.2	-6.83	3.58	-13.42
2416	MW244	07/23/98	NA	ND(2)	ND(20)	26	-56.5	-7.97	4.75	-13.47
2443	MW269	07/27/98	NA	ND(2)	31	1.4	-55	-7.7	69.42	-9.63
2309	MW134 (Golf Course)	07/27/98	NA	ND(2)	ND(20)	4	-62.6	-8.57	4.61	-11.14
2720	LMW-1, Port 1 (120)	06/16/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2721	LMW-1, Port 2 (170)	06/22/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2722	LMW-1, Port 3 (220)	06/18/98	ND(1)	NA	NA	NA	-66.8	-8.79	2.28	-10.73
2723	LMW-1, Port 4 (285)	06/18/98	ND(1)	NA	NA	NA	-66.1	-8.83	2.61	-14.39
2724	LMW-1, Port 5 (340)	06/19/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2725	LMW-1, Port 6 (410)	06/22/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2726	LMW-1, Port 7 (480)	06/17/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2727	LMW-1, Port 8 (530)	06/17/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2728	LMW-1, Port 9 (610)	06/16/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2729	LMW-1, Port 10 (700)	06/15/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2730	LMW-2, Port 1 (125)	06/12/98	1.1	NA	NA	NA	NA	NA	NA	NA
2731	LMW-2, Port 2 (180)	06/08/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2732	LMW-2, Port 3 (215)	06/09/98	1.2	NA	NA	NA	NA	NA	NA	NA
2733	LMW-2, Port 4 (280)	06/12/98	0.65 J	NA	NA	NA	NA	NA	NA	NA
2734	LMW-2, Port 5 (350)	06/12/98	0.61 J	NA	NA	NA	NA	NA	NA	NA
2735	LMW-2, Port 6 (395)	06/10/98	1.4	NA	NA	NA	NA	NA	NA	NA
2736	LMW-2, Port 7 (485)	06/11/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2737	LMW-2, Port 8 (555)	06/11/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2738	LMW-2, Port 9 (595)	06/10/98	ND(1)	NA	NA	NA	NA	NA	NA	NA
2739	LMW-2, Port 10 (695)	06/09/98	0.99 J	NA	NA	NA	NA	NA	NA	NA

NA = Well not analyzed for specified compound

J = Estimated value, below quantitation limit.

MLW-5, Zone 4 (385) - insufficient quantity of water to run analysis.

PLATES

UNSCANNED ITEM (S)

TO VIEW THE ITEM(S), CONTACT THE
SUPERFUND RECORDS CENTER

ATTACHMENT A

FIELD FORMS

AVAILABLE UPON REQUEST

ATTACHMENT B

**CHAIN-OF-CUSTODY AND
LABORATORY DATA SHEETS**

AVAILABLE UPON REQUEST